

What is claimed is:

1. In a supported shear of the type in which axially adjacent and integral lengths of linear stock such as tubing are laterally displaced relative to one another along a shear plane at right angles to the longitudinal axis of said stock:

non-driven ram means for receiving and holding said stock;

driven ram means adjacent the non-driven ram means for receiving said stock; and

means for alternately driving said moveable ram in opposite directions through an orbital path relative to the non-driven ram.

2. Apparatus as defined in claim 1 wherein the means for driving includes first and second hydraulic cylinders.

3. Apparatus as defined in claim 1 wherein said means for driving comprises:

a pinion connected to said driven ram;

a first rack engaged with the pinion and mounted for linear translation to rotate said pinion in a first direction; and

a second rack engaged with the pinion and mounted for linear translation to rotate said pinion in a second direction.

4. Apparatus as defined in claim 3 further comprising:

power means for causing linear translation of said first and second racks in opposite directions.

5. Apparatus as defined in claim 4 further including means for varying the power level of said power means during translation of said rack.

6. Apparatus as defined in claim 3 wherein the total linear displacement of said first rack is at least approximately equal to one revolution of said drive shaft.

7. Apparatus as defined in claim 1 wherein:

said stock is tubular; and

said shear further comprises a mandrel extensible into said stock in the location of the shear plane to maintain the shape thereof during a shearing operation.

8. For use in combination with a bladeless shear for linear stock which shear comprises a stock-receiving ram having an eccentrically driven wheel disposed therein, a wheel drive comprising:

a drive shaft connected to said wheel;

a pinion connected to said shaft for rotation therewith;

first and second racks engaging said pinion and linearly translatable to rotate the pinion in respective first and second opposite directions; and

power means for translating said racks.

9. In a bladeless shear device of the type having first and second tools aligned with a work piece axis and means for causing orbital motion of one of the tools relative to the other:

an actuator having a linearly translating drive component; and

means for converting the linear translation of the drive component into orbital motion of said one tool.